

### In the Claims

The following listing of the claims replaces all previous listings.

1.-26. (Canceled)

27. (Currently Amended) A method of preparing a tissue block for pathological examinations by encasing the tissue block in a tissue embedding in order to obtain a tissue block that is provided with reference positions for use in a method of cutting the tissue block ~~according to claim 1~~ in slices with a predetermined orientation in the tissue block, wherein the tissue block, such as an internal organ or other internal anatomical structures, is placed with a predetermined position and then simultaneously sliced into a multiple of sections, and in an apparatus for cutting of ~~the~~ the tissue block in slices with a predetermined orientation in the tissue block for obtaining a direct correlation of CT, MR or PET images for pathological examination, said apparatus comprising a support surface for receiving ~~the~~ the tissue block, sectioning means comprising a multiple of cutting members, and driving means for moving the sectioning means towards the support surface for slicing a tissue block into sections, said method comprising: ~~the steps of~~

filling a moulding form with an appropriate amount of non-toxic, biologically inert polymer moulding material, said form having at least one reference surface, and positioning a tissue block in said polymer moulding material in a predetermined position relative to said at least one reference surface, while the polymer moulding material is in ~~its~~ a soft state.

28. (Original) A method according to claim 27, wherein the tissue block is positioned in the polymer material with an orientation that corresponds to the orientation of the tissue block in vivo.

29. (Previously Presented) A method according to claim 27, whereby the tissue block is embedded in a bottom mould part and a top mould is formed in a top moulding form that is filled with polymer moulding material and placed on top of the lower moulding part with a partly encased tissue block, so that the tissue block is completely encased by the moulding.

30. (Previously Presented) A method according to claim 27, whereby the tissue block is fixed to a reference moulding of predetermined dimensions and whereby said reference moulding is pivoted into a predetermined position in one or more directions, and then moulded into at least a bottom moulding.

31. (Previously Presented) A method according to claim 27, whereby the polymer material is a cold polymerisate that polymerises by addition of water, such as an alginate plastic polymer.

32. (Currently Amended) An apparatus for producing a tissue embedding according to a method according to claim 27 for use in an apparatus for cutting of a tissue block in slices with a predetermined orientation in the tissue block for obtaining a direct correlation of CT, MR or PET images for pathological examination, said apparatus comprising a support surface for receiving a tissue block, sectioning means comprising a multiple of cutting members, and driving means for moving the sectioning means towards the support surface for slicing a tissue block into sections, said apparatus comprising:

first moulding means defining a reference moulding form for embedding a tissue block in a moulding, said first moulding means comprising an tubular side portion and first bottom plate means providing a bottom surface in the reference moulding form,

positioning means comprising at least one set of pivoting means for pivoting a reference mould, and

second moulding means for defining a bottom moulding form, said second moulding means comprising a retractable, tubular side wall and a second plate means for providing a bottom surface in the bottom moulding form.

33. (Original) An apparatus according to claim 32, wherein third moulding means are provided for defining a top moulding form, said third moulding means comprising a tubular side wall form with a cross section generally corresponding to the tubular side wall of the second moulding means.

34. (Previously Presented) An apparatus according to claim 32, wherein a centrally disposed, retractable piston having a hemispherical end portion that extends into and forms part of the reference mould form when extended.

35. (Previously Presented) An apparatus according to claim 32, wherein the pivoting means comprise two oppositely disposed, aligned pins that are provided in the outer edge region of the second moulding means and are radially insertable in the reference mould defining a pivot axis for pivoting the reference mould into a desired position.

36. (Original) An apparatus according to claim 35, wherein two sets of pivoting means are provided defining two preferably mutually orthogonal pivot axes.

37. (Currently Amended) A tissue embedding for providing predetermined reference surfaces for accurate positioning of a tissue block in an apparatus for cutting of a tissue block in slices with a predetermined orientation in the tissue block for obtaining a direct correlation of CT, MR or PET images for pathological examination, said apparatus comprising a support surface for receiving [[a]] the tissue block, sectioning means comprising a multiple of cutting members, and driving means for moving the sectioning means towards the support surface for slicing [[a]] the tissue block into sections, for the performance of a method ~~according to claim 1~~ for cutting of the tissue block in slices with a predetermined orientation in the tissue block, wherein the tissue block is placed with a predetermined position and then simultaneously sliced into a multiple of sections, whereby [[a]] the tissue block is at least partly fixed in a mould having a predetermined reference surface, said tissue embedding comprising mould parts made of a non-toxic plastic polymer material.

38. (Original) A tissue embedding according to claim 37, wherein the tissue block is provided with a bottom mould part and a top mould part encasing the tissue block inside said mould parts.

39. (Canceled)